

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-20. (Cancelled)

21. (Currently Amended) A source of light of a spectrum of wavelengths extending over more than 300 nm, the source comprising:

a laser, which operates at or near its fundamental wavelength and produces pulses of a duration longer than 0.5 ns; and

a micro-structured optical fiber arranged to guide the pulses in a core,
~~wherein the light is generated by the pulses in the fiber, in which the micro-structured fiber includes a said core having has a diameter greater than 4 microns,~~
the light is generated by the pulses in the core; and

wherein more than 80% of the light of the spectrum of wavelengths is in the lowest order transverse mode supported by the fiber.

22. (Previously Presented) The source as claimed in claim 21, wherein the laser is a monolithic laser.

23. (Previously Presented) The source as claimed in claim 22, wherein the monolithic laser is a microchip laser.

24. (Previously Presented) The source as claimed in claim 21, wherein the pulses of light are of a duration of more than 1 ns.

25. (Previously Presented) The source as claimed in claim 21, wherein the pulses have a peak power of less than 50 KW.

26. (Previously Presented) The source as claimed in claim 21, wherein the pulses have a peak power and interact with the fiber over a length of the fiber such that the peak power times the interaction length is less than 2 kWm.

27. (Previously Presented) The source as claimed in claim 21, wherein the spectrum extends over more than 500 nm.

28. (Previously Presented) The source as claimed in claim 21, wherein the fundamental wavelength is longer than 600 nm.

29. (Previously Presented) The source as claimed in claim 21, wherein the fundamental wavelength ranges from about 1000 nm to 1100 nm.

30. (Previously Presented) The source as claimed in claim 21, wherein the micro-structured optical fiber has a zero dispersion wavelength λ_0 and the operating wavelength of the laser is less than the zero dispersion wavelength.

31. (Previously Presented) The source as claimed in claim 21, wherein the micro-structured optical fiber has a zero dispersion wavelength λ_0 and the operating wavelength of the laser is greater than the zero dispersion wavelength.

32. (Previously Presented) The source as claimed in claim 21, wherein the micro-structured optical fiber has a zero dispersion wavelength between 1000 nm and 1100 nm.

33. (Previously Presented) The source as claimed in claim 21, wherein the micro-structured optical fiber is arranged to support propagation of the pulses in a single transverse mode.

34. (Previously Presented) The source as claimed in claim 21, wherein the micro-structured optical fiber is arranged to support propagation of light at all wavelengths in a single transverse mode.

35. (Previously Presented) The source as claimed in claim 21, wherein the micro-structured fiber has a hole-to-hole pitch greater than 2.5 microns.

36. (Previously Presented) The source as claimed in claim 21, wherein the micro-structured fiber includes a core having a diameter greater than 4.5 microns.

37. (Previously Presented) The source as claimed in claim 21, wherein the micro-structured fiber includes a cladding region comprising an array of holes of diameter d and hole-to-hole pitch Λ , in which d/Λ is less than 0.7.

38. (Previously Presented) The source as claimed in claim 21, wherein the micro-structured fiber includes an effective nonlinear area greater than $8 \mu\text{m}^2$.

39. (Previously Presented) The source of light of a spectrum of wavelengths extending over more than 300 nm, the source comprising:
a laser, which operates at or near its fundamental wavelength in the range 1000 nm to 1100 nm and produces pulses of a duration longer than 0.5 ns; and
a micro-structured optical fiber arranged to guide the pulses,
wherein the light is generated by the pulses in the fiber, and the micro-structured optical fiber has a zero dispersion wavelength between 1000 nm and 1100 nm.

40. (Currently Amended) A method of generating light of a spectrum of wavelengths extending over 300 nm, the method comprising:
operating a monolithic laser at or near its fundamental wavelength to provide pulses of light of a duration longer than 0.5 ns; and
guiding the pulses in a core of a micro-structured optical fiber, which said core is arranged to have ~~a core having a~~ diameter greater than 4 microns to have more than 80% of the generated light of the spectrum of wavelengths in the lowest order transverse mode supported by the fiber.